CLAIMS:

1. A method for disintegrating and granulating slags, in which the molten slag is ejected into a granulation chamber by the aid of a propulsion jet, characterized in that gases, in particular air or oxygen, are introduced into the molten slag to form a foamed slag, that the temperature of the foamed slag is raised to a temperature of above 1350°C, in particular 1420° to 1680°C, by the aid of fuels such as, e.g., coal introduced into the foamed slag, and that the foamed slag is ejected into a granulation chamber.

2. A method according to claim 1, characterized in that the foamed slag is ejected by vapor and impacted with high-pressure water in countercurrent.

3. A method according to claim 2, characterized in that vapor having a temperature of between 200° and 1200°C and a pressure of between 5 and 15 bars is used to eject the foamed slag.

4. A method according to claim 2, characterized in that high-pressure water having a pressure of between 50 and 300 bars is directed against the foamed slag vapor jet.

5. A method according to claim 2, characterized in that vapor having a temperature of between 200° and 1200°C and a pressure of between 5 and 15 bars is used to eject the foamed

slag, and high-pressure water having a pressure of between 50 and 300 bars is directed against the foamed slag vapor jet.

6. A method according to claim 1, characterized in that the slag basicity in the foamed slag is adjusted to values of from 0.8 to 1.3 by the addition of one or more of the group consisting of CaO, Al_2O_3 and SiO_2.

7. A method according to claim 2, characterized in that the slag basicity in the foamed slag is adjusted to values of from 0.8 to 1.3 by the addition of one or more of the group consisting of CaO, Al_2O_3 and SiO_2.

8. A method according to claim 3, characterized in that the slag basicity in the foamed slag is adjusted to values of from 0.8 to 1.3 by the addition of one or more of the group consisting of CaO, Al_2O_3 and SiO_2.

9. A method according to claim 4, characterized in that the slag basicity in the foamed slag is adjusted to values of from 0.8 to 1.3 by the addition of one or more of the group consisting of CaO, Al_2O_3 and SiO_2.

10. A method according to claim 1, characterized in that the volume weight of the foamed slag is adjusted to below 0.35 kg/dm^3, in particular approximately 0.28 kg/dm^3.

11. A method according to claim 2, characterized in that the volume weight of the foamed slag is adjusted to below 0.35 kg/dm^3, in particular approximately 0.28 kg/dm^3.

12. A method according to claim 3, characterized in that the volume weight of the foamed slag is adjusted to below 0.35 kg/dm^3, in particular approximately 0.28 kg/dm^3.

13. A method according to claim 4, characterized in that the volume weight of the foamed slag is adjusted to below 0.35 kg/dm^3, in particular approximately 0.28 kg/dm^3.

14. A method according to claim 1, characterized in that the foamed slag is maintained under a pressure of between 3 and 7 bars.

15. A method according to claim 2, characterized in that the foamed slag is maintained under a pressure of between 3 and 7 bars.

16. A method according to claim 3, characterized in that the foamed slag is maintained under a pressure of between 3 and 7 bars.

17. A method according to claim 4, characterized in that the foamed slag is maintained under a pressure of between 3 and 7 bars.

18. A method according to claim 5, characterized in that the slag basicity in the foamed slag is adjusted to values of from 0.8 to 1.3 by the addition of one or more of the group

consisting of CaO, Al_2O_3 and SiO_2, the volume weight of the foamed slag is adjusted to below 0.35 kg/dm^3, in particular approximately 0.28 kg/dm^3, and the foamed slag is maintained under a pressure of between 3 and 7 bars.

19. A method according to claim 1, characterized in that exhaust gases from the foamed slag are fed to a gas turbine.

20. A method according to claim 2, characterized in that exhaust gases from the foamed slag are fed to a gas turbine.

21. A method according to claim 3, characterized in that exhaust gases from the foamed slag are fed to a gas turbine.

22. A method according to claim 4, characterized in that exhaust gases from the foamed slag are fed to a gas turbine.

23. A method according to claim 5, characterized in that exhaust gases from the foamed slag are fed to a gas turbine.

24. A method according to claim 5, characterized in that the slag basicity in the foamed slag is adjusted to values of from 0.8 to 1.3 by the addition of one or more of the group consisting of CaO, Al_2O_3 and SiO_2, the volume weight of the foamed slag is adjusted to below 0.35 kg/dm^3, in particular approximately 0.28 kg/dm^3, the foamed slag is maintained under a

pressure of between 3 and 7 bars, and exhaust gases from the foamed slag are fed to a gas turbine.

25. A device for disintegrating and granulating slags, comprising: a tundish (1) into which a gas lance (20) opens; a foamed slag overflow (5) and an outlet opening (6) for slag; said tundish (1) carrying a pressure-proof lid (8) to which a sluice (9) is connected to charge solids and coal above the slag bath; and a lance (7) opening into the slag outlet opening (6) to feed a carrier gas aimed to eject the foamed slag (4).

26. A device according to claim 25, further comprising: a grinding and evaporation chamber connected to the slag outlet opening (6); a pressure water duct (16) opening on the chamber side located opposite the slag outlet (6); and a screening means (18) connected to the grinding and evaporation chamber to discharge the disintegrated and granulated material.

27. A device according to claim 25, further comprising an exhaust gas duct connected to the tundish (1) to drive a gas turbine.

28. A device according to claim 25, further comprising an exhaust gas duct connected to the tundish (1) to power a heat exchanger.

29. A device for disintegrating and granulating slags, comprising: a tundish (1) in whose bottom tuyeres (2) are formed; a foamed slag overflow (5) and an outlet opening (6) for slag; said tundish (1) carrying a pressure-proof lid (8) to which a sluice (9) is connected to charge solids and coal above the slag bath; and a lance (7) opening into the slag outlet opening (6) to feed a carrier gas aimed to eject the foamed slag (4).

30. A device according to claim 29, further comprising: a grinding and evaporation chamber connected to the slag outlet opening (6); a pressure water duct (16) opening on the chamber side located opposite the slag outlet (6); and a screening means (18) connected to the grinding and evaporation chamber to discharge the disintegrated and granulated material.

31. A device according to claim 29, further comprising an exhaust gas duct connected to the tundish (1) to drive a gas turbine.

32. A device according to claim 29, further comprising an exhaust gas duct connected to the tundish (1) to power a heat exchanger.

33. A device for disintegrating and granulating slags, comprising: a tundish (1) into which a gas lance (20) opens; a foamed slag overflow (5) and an outlet opening (6) for slag; said tundish (1) carrying a pressure-proof lid (8) to which a sluice (9) is connected to charge solids and coal above the slag bath; a lance (7) opening into the slag outlet opening (6) to feed a carrier gas aimed to eject the foamed slag (4); a means for ejecting the foamed slag by vapor; and a means for impacting the foamed slag with high-pressure water in countercurrent.

34. A device according to claim 33, further comprising: a grinding and evaporation chamber connected to the slag outlet opening (6); a pressure water duct (16) opening on the chamber side located opposite the slag outlet (6); and a screening means (18) connected to the grinding and evaporation chamber to discharge the disintegrated and granulated material.

35. A device according to claim 33, further comprising an exhaust gas duct connected to the tundish (1) to drive a gas turbine.

36. A device according to claim 33, further comprising an exhaust gas duct connected to the tundish (1) to power a heat exchanger.

37. A device for disintegrating and granulating slags, comprising: a tundish (1) in whose bottom tuyeres (2) are arranged; a foamed slag overflow (5) and an outlet opening (6) for

slag; said tundish (1) carrying a pressure-proof lid (8) to which a sluice (9) is connected to charge solids and coal above the slag bath; a lance (7) opening into the slag outlet opening (6) to feed a carrier gas aimed to eject the foamed slag (4); a means for ejecting the foamed slag by vapor; and a means for impacting the foamed slag with high-pressure water in countercurrent.

Cont 2

38. A device according to claim 37, further comprising: a grinding and evaporation chamber connected to the slag outlet opening (6); a pressure water duct (16) opening on the chamber side located opposite the slag outlet (6); and a screening means (18) connected to the grinding and evaporation chamber to discharge the disintegrated and granulated material.

39. A device according to claim 37, further comprising an exhaust gas duct connected to the tundish (1) to drive a gas turbine.

40. A device according to claim 37, further comprising an exhaust gas duct connected to the tundish (1) to power a heat exchanger.